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SEQUENCE LISTING

<110> HATTORI, NORIAKI
MURAKAMI, SEIJI

<120> LUCIFERASE AND A METHOD FOR DETECTING INTRACELLULAR ATP USING THE SAME

<130> 193582US-3524-7126-0 PCT

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<140> 09/581241
<141> 2000-06-26

<150> JP97/361022

<151> 1997-12-26

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<170> PatentIn version 3.1

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atg gat cga tat gca aaa ctt gga gca att gct ttt act aac gca ctt Met Asp Arg Tyr Ala Lys Leu Gly Ala Ile Ala Phe Thr Asn Ala Leu	35	40	45	144
acc ggt gtc gat tat acg tac gcc gaa tac tta gaa aaa tca tgc tgt Thr Gly Val Asp Tyr Thr Ala Glu Tyr Leu Glu Lys Ser Cys Cys	50	55	60	192
cta gga gag gct tta aag aat tat ggt ttg gtt gat gga aga att Leu Gly Glu Ala Leu Lys Asn Tyr Gly Leu Val Val Asp Gly Arg Ile	65	70	75	240
gcg tta tgc agt gaa aac tgt gaa gaa ttc ttt att cct gta tta gcc Ala Leu Cys Ser Glu Asn Cys Glu Glu Phe Phe Ile Pro Val Leu Ala	85	90	95	288
ggg tta ttt ata ggt gtc ggt gtg gct cca act aat gag att tac act Gly Leu Phe Ile Gly Val Gly Val Ala Pro Thr Asn Glu Ile Tyr Thr	100	105	110	336
cta cgt gaa ttg gtt cac agt tta ggc atc tct aag cca aca att gta Leu Arg Glu Leu Val His Ser Leu Gly Ile Ser Lys Pro Thr Ile Val	115	120	125	384
ttt agt tct aaa aaa gga tta gat aaa gtt ata act gta caa aaa acg Phe Ser Ser Lys Lys Gly Leu Asp Lys Val Ile Thr Val Gln Lys Thr	130	135	140	432
gta act gct att aaa acc att gtt ata ttg gac agc aaa gtg gat tat Val Thr Ala Ile Lys Thr Ile Val Ile Leu Asp Ser Lys Val Asp Tyr	145	150	155	480
aga ggt tat caa tcc atg gac aac ttt att aaa aaa aac act cca caa Arg Gly Tyr Gln Ser Met Asp Asn Phe Ile Lys Lys Asn Thr Pro Gln	165	170	175	528
ggg ttc aaa gga tca agt ttt aaa act gta gaa gtt aac cgc aaa gaa Gly Phe Lys Gly Ser Ser Phe Lys Thr Val Glu Val Asn Arg Lys Glu	180	185	190	576
caa gtt gct ctt ata atg aac tct tcg ggt tca acc ggt ttg cca aaa Gln Val Ala Leu Ile Met Asn Ser Ser Gly Ser Thr Gly Leu Pro Lys	195	200	205	624
ggg gtg caa ctt act cat gaa aat ttg gtc act aga ttt tct cac gct Gly Val Gln Leu Thr His Glu Asn Leu Val Thr Arg Phe Ser His Ala	210	215	220	672
aga gat cca att tat gga aac caa gtt tca cca ggc acg gct att tta Arg Asp Pro Ile Tyr Gly Asn Gln Val Ser Pro Gly Thr Ala Ile Leu	225	230	235	720
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 Tyr Leu Thr Cys Gly Phe Arg Ile Val Met Leu Thr Lys Phe Asp Glu
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 Glu Thr Phe Leu Lys Thr Leu Gln Asp Tyr Lys Cys Ser Ser Val Ile
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 Leu Val Pro Thr Leu Phe Ala Ile Leu Asn Arg Ser Glu Leu Leu Asp
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 Lys Tyr Asp Leu Ser Asn Leu Val Glu Ile Ala Ser Gly Gly Ala Pro
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 Gly Val Arg Gln Gly Tyr Leu Thr Glu Thr Thr Ser Ala Ile Ile
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 Ile Thr Pro Glu Gly Asp Asp Lys Pro Gly Ala Ser Gly Lys Val Val
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 cca tta ttt aaa gca aaa gtt atc gat ctt gat act aaa aaa act ttg 1152
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 Lys Gly Tyr Val Asp Asn Pro Glu Ala Thr Arg Glu Ile Ile Asp Glu
 405 410 415
 gaa ggt tgg ttg cac aca gga gat att ggg tat tac gat gaa gaa aaa 1296
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 420 425 430
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 His Phe Phe Ile Val Asp Arg Leu Lys Ser Leu Ile Lys Tyr Lys Gly
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 tat caa gta cca cct gct gaa tta gaa tct gtt ctt ttg caa cat cca 1392
 Tyr Gln Val Pro Pro Ala Glu Leu Glu Ser Val Leu Leu Gln His Pro
 450 455 460

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Thr Gly Val Asp Tyr Thr Tyr Ala Glu Tyr Leu Glu Lys Ser Cys Cys
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Leu Gly Glu Ala Leu Lys Asn Tyr Gly Leu Val Val Asp Gly Arg Ile
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Gly Leu Phe Ile Gly Val Ala Pro Thr Asn Glu Ile Tyr Thr

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105

110

Leu Arg Glu Leu Val His Ser Leu Gly Ile Ser Lys Pro Thr Ile Val
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Phe Ser Ser Lys Lys Gly Leu Asp Lys Val Ile Thr Val Gln Lys Thr
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Gln Val Ala Leu Ile Met Asn Ser Ser Gly Ser Thr Gly Leu Pro Lys
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Gly Val Gln Leu Thr His Glu Asn Leu Val Thr Arg Phe Ser His Ala
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Tyr Leu Thr Cys Gly Phe Arg Ile Val Met Leu Thr Lys Phe Asp Glu
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Lys Tyr Asp Leu Ser Asn Leu Val Glu Ile Ala Ser Gly Gly Ala Pro
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Pro Leu Phe Lys Ala Lys Val Ile Asp Leu Asp Thr Lys Lys Thr Leu
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Gly Pro Asn Arg Arg Gly Glu Val Cys Val Lys Gly Pro Met Leu Met
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Lys Gly Tyr Val Asp Asn Pro Glu Ala Thr Arg Glu Ile Ile Asp Glu
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His Phe Phe Ile Val Asp Arg Leu Lys Ser Leu Ile Lys Tyr Lys Gly
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Tyr Gln Val Pro Pro Ala Glu Leu Glu Ser Val Leu Leu Gln His Pro
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Asn Ile Phe Asp Ala Gly Val Ala Gly Val Pro Asp Pro Ile Ala Gly
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 Phe Tyr Pro Ile Glu Glu Gly Ser Ala Gly Ala Gln Leu Arg Lys Tyr
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 Met Asp Arg Tyr Ala Lys Leu Gly Ala Ile Ala Phe Thr Asn Ala Leu
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 Thr Gly Val Asp Tyr Thr Tyr Ala Glu Tyr Leu Glu Lys Ser Cys Cys
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 Leu Gly Glu Ala Leu Lys Asn Tyr Gly Leu Val Val Asp Gly Arg Ile
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 Phe Ser Ser Lys Lys Gly Leu Asp Lys Val Ile Thr Val Gln Lys Thr
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 Gln Val Ala Leu Ile Met Asn Ser Ser Gly Ser Thr Gly Leu Pro Lys
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 Gly Val Gln Leu Thr His Glu Asn Ile Val Thr Arg Phe Ser His Ala
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 Arg Asp Pro Ile Tyr Gly Asn Gln Val Ser Pro Gly Thr Ala Ile Leu
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His Phe Phe Ile Val Asp Arg Leu Lys Ser Leu Ile Lys Tyr Lys Gly		
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Lys Gly Tyr Val Asp Asn Pro Glu Ala Thr Arg Glu Ile Ile Asp Glu
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Tyr Gln Val Pro Pro Ala Glu Leu Glu Ser Val Leu Leu Gln His Pro
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